

6. The integrated circuit of claim 3 wherein said visual display element comprises an array of semiconductor pixels having dimensions of less than 20 micrometers.
7. The integrated circuit of claim 1 wherein said sensor element is selected from the group consisting of strain gauges, thermal gauges, radiation gauges, and chemically responsive gauges.

REMARKS

Applicant has carefully reviewed and considered the Office Action mailed on December 14, 2000, and the references cited therewith.

No claims are amended, cancelled, or added; as a result, claims 1-7 are now pending in this application.

§102 Rejection of the Claims

Claims 1 and 7 were rejected under 35 USC § 102(b) as being anticipated by Parkhurst et al. (U.S. 5,412,372). Applicant respectfully traverses this rejection.

A claim is anticipated “only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” MPEP § 2131. Further, to support a 102 rejection, “the identical invention must be shown in as complete detail as is contained in the . . . claim.” MPEP § 2131.

Parkhurst describes a “portable medication dispenser” (*see* abstract, ln. 1), which “monitors regimen-conforming use of medications provided in standard as-marked blister packages”. The portable medication dispenser includes a mechanical switch 380 (*see* Fig. 10) that is “operable by the closure of the retainer bracket 116 (*see* Fig. 1) to confirm loading of the blister package” (*see* col. 11, ln. 66 to col. 12, ln. 1).

In contrast, the present invention as claimed comprises “An integrated circuit with a micromechanical element comprising a support substrate supporting a sensor element, a logic circuit and a semiconductor visual display element, the sensor element electrically connected to a logic circuit, and the logic circuit being electrically connected to the semiconductor visual display element” (*see* claim 1).

The Office Action contends that the integrated circuit as claimed is analogous to and

anticipated by the portable medication dispenser of the present invention. Applicant points out that an integrated circuit and a medication dispenser are not generally analogous or similar, and that the medication dispenser of the cited reference and the integrated circuit of the present invention differ greatly in structure and function.

First, Figure 10 does not illustrate an integrated circuit, but instead illustrates the electrical system of the dispenser (*see* col. 11, ln. 41). Figure 10 does not illustrate and the specification does not describe a micromechanical element comprising part of an integrated circuit, but instead only discusses the switch 380 cited in the Office Action. This switch is not described as anything other than a normal switch, mounted within the dispenser such that it is actuated by the retainer bracket 116 of the Parkhurst reference (*see see* col. 11, ln. 66 to col. 12, ln. 1, and Figures 1, 10). The switch is not a micromechanical element, and is not part of an integrated circuit.

Second, the reference does not disclose a support substrate as claimed in the present invention. The dashed line of Figure 10 in the Parkhurst reference embodies not an integrated circuit but a portable medication dispenser as described earlier, which is connectable to various external elements such as a batter 370 for power, and the elastomer interface 180 to the sensor sheet 148 of the blister card (*see* col. 10, ln. 40-62).

Third, the Parkhurst reference does not disclose an integrated circuit containing a visual display element. The Office Action states that element 360 of Figure 10 is analogous to a visual display element, but element 360 is a clock/nvram module having no display function and not comprising part of an integrated circuit having the additional function claimed in the present invention (*see* Fig. 10; col. 11, ln. 59-62).

Because the various elements of the Parkhurst reference do not resemble the elements of the present invention in structure or function, and because they are combined to form a portable medication dispenser rather than an integrated circuit as is claimed in the present invention, the present invention differs greatly from the cited reference. Further, the cited reference fails to set forth every element set forth in the claims of the pending invention, and does not show the identical invention in as complete detail as is contained in the pending claims, and so fails to meet the requirements for a 102 rejection set forth in MPEP § 2131. Reexamination and allowance of claim 1 and of claims 2-7 that depend therefrom is respectfully requested.

§103 Rejection of the Claims

Claims 2-6 were rejected under 35 USC Sec. 103(a) as being unpatentable over Parkhurst et al. (U.S. 5,412,372) in view of Ishii et al. and further in view of Applicant's disclosure.

In order to support a 103 rejection, the applied reference or references when combined must teach or suggest all of the claim limitations. M.P.E.P. Sec. 2143. As discussed with respect to the 102 rejection, above, neither the patent to Parkhurst nor to Ishii teaches or suggests at least an "integrated circuit" comprising a "support substrate supporting a sensor element", and a "semiconductor visual display element" as claimed in independent claim 1. The arguments for the lack of these elements in the cited patents is discussed with respect to the 102 rejection above. Said arguments are hereby incorporated with respect to the 103 rejection.

In addition, since the cited patents do not teach all of the claim elements as required (M.P.E.P. Sec. 2143), the examiner's citation to Applicant's disclosure for the proposition that "it is well known in the art to form such an array of pixels using GaAs" is still insufficient to establish

obviousness since the combination suggested by the examiner still does not teach or suggest all of the claim elements of independent claim 1. Thus, neither a prima facie showing of anticipation nor a prima facie showing of obviousness has been set forth. As a result, the 102 and 103 rejections should be withdrawn.

Because the independent claim from which claims 2-6 depend is believed to be in condition for allowance as explained above, these dependent claims are also therefore believed to be in condition for allowance as dependent upon an allowable base claim.

Reexamination of these pending claims is therefore respectfully requested.

Documents Cited but Not Relied upon for this Office Action

The references cited by not relied upon for this Office Action have been considered and are not thought to affect the patentability of the claims as presented.

Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone

AMENDMENT AND RESPONSE UNDER 37 CFR § 1.111

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Applicant's attorney (612-349-9581) to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 50-0439.

Respectfully submitted,

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Commissioner of Patents, Washington, D.C. 20231, on this 30 day of March, 2001.

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